

AMENDMENTS

In the Claims:

The listing of claims below replaces all prior versions, and listings, of claims in this Application:

Listing of Claims:

Claims 1-28 (canceled).

Claim 29 (currently amended): A solid multi-component membrane comprising a gas-impervious mixed metal oxide material of perovskite structure having both oxygen ion conductivity and electron conductivity, the mixed metal oxide material containing a lanthanide in combination with Co, Sr or an oxide thereof, and further provided that the solid membrane contains less than 13 mol percent bismuth, cerium, or a mixture of bismuth and cerium.

Claim 30 (previously presented): The solid membrane of claim 29 wherein the lanthanide is lanthanum.

Claim 31 (previously presented): A solid multi-component membrane comprising an intimate, gas-impervious, multi-phase mixture of a first mixed metal oxide material of a perovskite structure with a second mixed metal oxide material of a perovskite structure, wherein the first mixed metal oxide material has an electron conductivity greater than that of the second mixed metal oxide material and the second mixed metal oxide material has an oxygen ion conductivity greater than that of the first mixed metal oxide material.

Claims 32-44 (canceled).

Claim 45 (currently amended): A solid multi-component membrane comprising a gas-impervious mixed metal oxide material of a perovskite structure having both oxygen ion conductivity and electron conductivity, the mixed metal oxide material containing a lanthanide in combination with Co, Sr or an oxide thereof, and further provided that the solid membrane contains bismuth, cerium, or a mixture of bismuth and cerium in an amount of less than 13 mol percent.

Claim 46 (previously presented): The solid membrane of claim 45 wherein the lanthanide is lanthanum.